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ABSTRACT

Few higher education institutions provide systematic information for high schools beyond what is involved in the application/admissions process. The Northern Michigan University (NMU) High School Feedback System was designed to meet the needs expressed by high school personnel in the Upper Peninsula of Michigan for increased frequency, quantity, and quality of feedback about students enrolled from their institutions. The system provides the high schools with feedback for curricular evaluation and more effective academic advising. In its complete form, the model provides a wealth of information to its feeder institutions. A comprehensive feedback report has also been created to provide information on the academic credentials, performance, and graduation of students from those high schools providing only a few students to NMU. The NMU model provides for the internal routing of data as well as the transmission of a wide variety of evaluatory information directly back to high schools. The feedback system was developed using DataEase. The model represents a formal commitment on the part of one college administration to share systematically with the high schools on which it depends heavily. Included is a detailed discussion on the operation of the NMU feedback system. Appended are illustrated examples of each main component of the NMU High School Feedback System. Includes 7 references. (LPT)

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AIR Professional File

A Responsive High School Feedback System

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The weaknesses of American education, particularly its secondary system, have been widely and loudly decried in numerous national studies. Ernest Boyer, in a recent Carnegie report (1987, p.2) notes that there is "a clear discontinuity between the schools and higher education. Today, educators from the separate levels, with few exceptions carry on their work in isolation." This isolation manifests itself in a lack of communication and interaction between the various educational strata. In this informational vacuum, educators receive little, if any, feedback about what they are doing well and need to reinforce and also what they are doing poorly and need to improve.

As Boyer (1983) points out, however:

> High schools do not carry on their work in isolation. They are connected to elementary and junior high schools and to higher education. In the end, the quality of the American high school will be shaped by the quality of these connections. (p. 316)

A critical challenge facing the educational enterprise in the United States, then, is how to enhance the communication and interaction between the different educational levels. At present, this communication and interaction is clearly lacking. A feedback model can provide us with the means and data so that we can better evaluate and better accomplish our educational goals.

HE 024 561

Theoretical Background

The theoretical underpinnings for the present model have been derived from a relatively simple "input-process-product" model. At all levels of education, we take entering students (input), provide them with instruction (process), and move them to the next grade (product). Due to the well publicized constraints of too many students, too little time, and a lack of communication, educators are virtually unaware of how well their "products" perform when they become the "input" at the next instructional level. It is clear that what is missing from the present approach is feedback. The inclusion of an evaluation/feedback loop will allow the educator to better assess the effectiveness of his or her instruction. With this loop, instructional processes can be improved so that subsequent groups of students will be better able to meet the requirements of the next level of education.

Review of Other Systems

A telephone survey was conducted to try to determine the types of information and data which were being shared by colleges and universities with high schools. While the survey was not meant to be a statistically representative one, an effort was made to contact a wide range of different types of postsecondary institutions. Factors considered in the selection were geographic region, size, location (urban vs. rural), type of control (public vs. private), selectivity (elite vs. nonselective) and level (two year vs. four year). In all, usable responses were obtained from over thirty-five different institutions.

The schools were asked to provide information about the types of feedback which they routinely provided to the high schools after the student was enrolled at their institution. Many reported that they provided viewbooks, college nights, and many other types of information to the high schools in order to assist students and interest them in attending their school. Other institutions reported that they would occasionally respond to ad hoc requests for data from a particular high school. These activities were not included here because they were not part of a systematic information-sharing program.

The major finding from this survey is that the majority of institutions contacted share little, if any, systematic information with the high schools. Once the application/

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admission process is completed and a high school is notified that a student has enrolled, communication typically ceases. This pattern was reported by institutions such as California State University- Northridge, Amherst College, the University of Southern Maine, and the State University of New York at Oneonta.

A number of different factors were cited by institutions for this lack of data exchange with the high schools. Four major categories of responses emerged:

1. Privacy restrictions related to the Buckley Amendment prohibit this (e.g., Fairfield University and Colgate University).
2. Size, programs, and mission make this impossible (e.g., Miami-Dade Community College, Yakima Valley Community College, WA).
3. Institutional priorities do not permit development of this type of system (Mankato State University, MN).
4. Pending proposal from the state to institute a formal plan (Virginia Commonwealth University).

It is also interesting to note that two institutions provided performance-related information to their community college feeder schools but not their high school feeders (East Texas State University and Utah State University).

A second category of institutions responded that they provide some systematic information to high schools but that it is relatively limited in scope. For example, Truman College of the City Colleges of Chicago provides high schools with enrollment and graduation lists of students each semester. Calvin College (MI) hosts a principal/freshman/counselor day where staff from approximately twenty feeder high schools can visit the students in a classroom setting and are provided with performance-related information.

There is a legislative requirement in the State of Michigan which mandates that the fifteen public institutions provide information on remediation to the in-state high schools from which their students have been drawn. In practice, each institution has responded in its own fashion. Oakland University reports to each high school district the number of students placed in remediation in English, and math.

Michigan State University provides a letter to each high school with placement information and the number and percentage of students in remediation in mathematics, English and the social sciences. Finally, the University of Michigan and Central Michigan University provide first-semester and first-year performance and credit hour information by individual student to each high school. While varying in complexity, each of these institutions has made a commitment to or has been coerced into systematically sharing remediation, performance and/or enrollment information with its feeder high schools.

A final category of institutions involves those providing systematic and comprehensive information to the high schools. Virginia Polytechnic Institute and State University (Virginia Tech) provides each state high school with a detailed analysis of specific high school courses taken and compares them to first year courses at Virginia Tech. These detailed course-related comparisons are made in English, mathematics, and the life sciences. Overall grade point average information is provided to the high school. In addition, total university figures are provided for purposes of comparison. Virginia Tech also provides similar types of data to its feeder community colleges.

Of all the institutions surveyed, the most comprehensive system is found in the three Regent's Universities of Iowa. The University of Iowa, Iowa State University and the University of Northern Iowa share responsibility for the development of feedback letters to each high school. This cooperative project enables a given high school to receive information about any of its previous-year graduates who attended one of these three primary in-state institutions. Each high school principal who wants this information and signs off on its confidentiality receives individual student data which includes academic credentials, first-semester and first-year grades and credits for their students as well as overall freshman-class data. In addition, actual course assignments to developmental, regular, and accelerated courses are delineated. Grades in each mathematics course are listed specifically. The high school is also provided with a profile of group data for itself as well as the total freshman class. These comprehensive reports are provided for each of the three Regent's institutions. Finally, a similar array of data are provided to community colleges.

This survey has found that few institutions provide systematic information to high schools beyond what is involved in the application/admission process. While definitely in the minority, a small number of institutions have developed feedback systems which provide an array of curricular, performance, and enrollment information to the high schools.

Setting

Northern Michigan University (NMU) is a public institution of about 8,500 students whose primary focus has been to provide selected undergraduate and graduate programs to the residents of the Upper Peninsula of Michigan. In this role, NMU has been exceptionally successful. Forty-three percent of the new freshmen from the Upper Peninsula who attended one of the fifteen Michigan public universities in fall 1988 attended NMU. Three hundred eleven of the 428 new freshmen from Marquette County (72.7%) attended NMU in fall 1988 (Tweddale 1989). Thus, it is clear that the high schools of the Upper Peninsula and NMU have had a mutually dependent relationship. While the strength of this relationship may be extreme, it is not unusual, however, for many post-secondary institutions and a core set of high schools to be related in a similar fashion.

Background

Given this symbiotic relationship it would be natural to assume that clear lines of communication would be established between the postsecondary institution and its feeder high schools. Further, it would be expected that the university would be routinely providing a wide array of feedback to the high schools upon which it depends so heavily for its enrollments. However, a survey (Duby and Mettlach, 1987) of Upper Peninsula superintendents, high school principals, and counselors indicated that secondary school personnel wanted the following:

1. Better lines of communication
2. More frequent communication
3. Information on the performance of their students

4. Outcomes information on who was graduating from which fields and how long it took to complete these programs
5. Information that could be used for curriculum planning at the high school level
6. Information that could be used in advising in order to convince students to take certain pre-college courses (e.g., a third or fourth mathematics course).

Purpose

The Northern Michigan University High School Feedback System is designed to meet the needs expressed by high school personnel for increased frequency, quantity, and quality of feedback. This system provides the high schools with feedback for curricular evaluation and more effective student advising, and it helps them with internal evaluation and accreditation requirements. In its complete form, the model provides a wealth of detailed information to our feeder institutions. A less comprehensive but still valuable feedback report has also been created to provide information on the academic credentials, performance, and graduation of students from those high schools providing only a few students to NMU.

Model

While most institutions do not routinely include high schools in their feedback loop, the NMU model provides for the internal routing of data as well as the transmission of a wide variety of evaluatory information directly back to the high schools. This feedback system will now be discussed in detail.

Phase 1--Placement Information

During college orientation visits, students are generally asked to complete a battery of English, mathematics, reading, and perhaps communication tests. These screening and placement devices help the college to assess the comprehensiveness and effectiveness of pre-college instruction. The results are utilized in college placement decisions and strongly influence whether developmental or remedial work may be required. While available, the findings are generally not shared with the high school.

In the present feedback system, placement results are internally routed to the class assignment process, and are also shared with the high schools so that the high schools can see in which curricular "strata" their former students have been placed. These outcome measures can then be utilized by the high school faculty and staff to help assess the degree to which their products (i.e., their high school graduates) are being effectively prepared for their roles as college freshmen.

At Northern Michigan University, placement tests are administered by the English and Mathematics Departments and are utilized for college course placement decisions in these areas. The placement results are also fed back to the high schools. Very specific data are provided which can have an impact on advising and curriculum planning at the secondary level. In English, the comprehensive NMU model provides the number of new freshmen from that high school who have been placed respectively into remedial, entry, or advanced-level English classes. [An example of this type of placement information is shown for a sample high school as Section 1 of the Appendix.] The high schools are also provided with actual samples (but not of their students) of written essays which illustrate the skills or lack of skills which distinguish between students placed at the three course levels.

The results of the mathematics placement test guide a new student into a specific course within the mathematics sequence which can be either remedial or entry level. The high schools are provided with a count of the number of new freshmen who have been placed into each mathematics course. The results from the English and mathematics placement tests are designed to provide specific meaningful information to the high schools so that faculty can begin to assess whether they are effectively teaching the skills which need to be learned in order for their students to be successful. A hoped-for byproduct of this information sharing will be the development of a dialogue between the mathematics and English faculty at the secondary and postsecondary levels. Of all the feedback provided within the comprehensive NMU model, the placement information segment is seen as most important since it can have a direct impact on the high school curriculum. It can provide a mechanism so that the lessons learned from one high school cohort can be fed back to strengthen important academic skills of subsequent cohorts of students.

Phase 2--Process Information

Once the college students are assigned to classes and begin their programs of study, the normal college cycle begins (process). Some postsecondary institutions provide high schools with first-semester or first-year grade point averages of students from their previous freshman class. Information about the progress of students over time, however, is not shared with the high school. The majority of postsecondary institutions have the capability to track students longitudinally since athletes, minority students, veterans, etc., are routinely followed in order to meet NCAA, state, and federal requirements. Thus, information regarding the progress of college students is being used internally and is also provided to external regulatory or accreditation bodies. However, it is not typically provided to the high school.

The process phase of the feedback system consists of the collection and distribution of two major types of college performance measures. The first component involves an analysis of the current class standing and academic performance of both new and continuing students from a given feeder high school. Specific information is presented on the number of students from that high school currently enrolled in each academic department and school. Cumulative grade point averages are also provided for each academic department. Finally, comparative figures are furnished for the entire student body. This gives the high school a context for interpreting the relative success of its former students. [An example of these performance data is provided for a sample high school as Section 2 of the Appendix.]

The second major component of the process portion of the feedback system is a detailed retention study based on new freshmen from each feeder high school for a ten-year period. Each new freshman cohort from 1980 through 1989 is traced for three years. The number of students persisting and making satisfactory academic progress at NMU is presented in both tabular and graphic form. This portion of the process phase of the

model provides high schools with the following information for each of the cohorts of new freshmen from that school for the previous decade.

1. The number of high school graduates who attended NMU each fall semester
2. The number and percentage of those students who returned for the second semester at NMU who were making satisfactory progress toward a degree (defined as achieving a grade point average of 2.00 [C] or higher)
3. The number and percentage of those students who returned to NMU for their third semester (i.e., their sophomore year) who were maintaining a cumulative grade point average of 2.00 or higher after this third semester
4. The number and percentage of those students who returned to NMU for their fifth semester (i.e., their junior year) who were maintaining a cumulative grade point average of 2.00 or higher after this fifth semester.

The fifth-semester statistic is particularly important because previous institutional studies have demonstrated that nearly all students who complete five semesters at NMU while making satisfactory academic progress will eventually receive a degree from NMU. Comparable retention information is also provided for the entire freshman cohort for each of the ten years. This provides a context for interpreting the relative success of students from that high school. [An example of this process type of retention information is shown for a sample high school as Section 3 of the Appendix.] Information of this type should be helpful in advising students and should be particularly useful for accreditation purposes. Increasingly, secondary institutions are being asked to document the relative "success" of their graduates in post-high-school pursuits.

Phase 3–Output Information

When students complete their programs at the university they become the "output" of this educational level. Information relating to their degree majors and academic honors is typically described in the written graduation program. Postsecondary institutions do not, however, systematically share these "success" stories with the high schools from which the individuals were originally recruited. Despite the widely shared malaise pervading the system of education in the United States, a record number of 1,386,900 degrees were expected to be granted at the bachelor's level and higher by postsecondary institutions in 1989-90 (Anderson, et al., 1989). While the high schools which feed this pipeline are playing a significant positive role in these success stories, the external feedback which they receive is almost uniformly negative.

At Northern Michigan University, the relatively simple step has been taken to link college degree information to the high school from which students were originally recruited. Once completed, it becomes possible to share the success stories with the secondary schools who played a major role in preparation of the students. The output segment of the model uses as a database all NMU degree recipients from the previous academic year. Information concerning the type of degree granted and the major program and academic honors (where applicable) are linked to the application file where the name of the high school, the high school graduating class, and the student's maiden name (if applicable) are collected. [An example of this degree related information is shown for a sample high school as Section 4 of the Appendix.]

The graduation letter is designed to provide very specific and personal information to the high school. Since the names of the former high school students and their graduating classes are provided, the feedback provides positive role models for current high school students as well as refreshing success stories and positive "surprises" for high school teachers and administrators. One byproduct of this phase of the model is to provide the names of successful college graduates from a given high school who might be persuaded to talk to current high school students in order to share their perspectives and to transmit to other students those factors related to future college success.

Phase 4–Product Information

After leaving the postsecondary institution, most graduates choose one of two major career paths. They may pursue graduate study or may seek employment. The typical option is the latter one, and the final phase of the feedback system is to provide the secondary institution with information about the type of employment attained by a given individual after leaving the university. At present, the feedback model does not include the continuing-education option. The employment information describes the former student as a "product" of the postsecondary system.

Over the past decade, postsecondary institutions have become increasingly concerned about the *products* of their labors. There are three major reasons for this concern. First, academic program reviews increasingly have turned to the former student as the best available source of information about the relevance of academic programs and the quality of instruction received. Second, accrediting bodies, legislatures, and the public increasingly are asking about the benefits which result from a publicly supported college education. Finally, public institutions increasingly have turned to their alumni (i.e., their products) for financial support. While a great deal of information is collected and is clearly available for internal use, institutions do not share this information with the high schools.

The product phase of the model is designed to provide the high schools with "real life" success stories and positive role models as well as valuable information for accreditation and outcomes assessment needs. [An example of this product type of data is shown for a sample high school as Section 5 of the Appendix.] One final benefit of this phase of the model is to provide to the high schools the names of successful teachers, administrators, and businessmen who might be willing, if asked, to share their time, energy and, perhaps, resources with their former high school.

The complete Northern Michigan University High School Feedback System has now been described in detail and is depicted in the figure.

While the development and implementation of such a system might seem like a great deal of effort, it is clearly motivated out of self interest. By providing high schools with these types of information, we can help them to better evaluate and improve their processes so that their

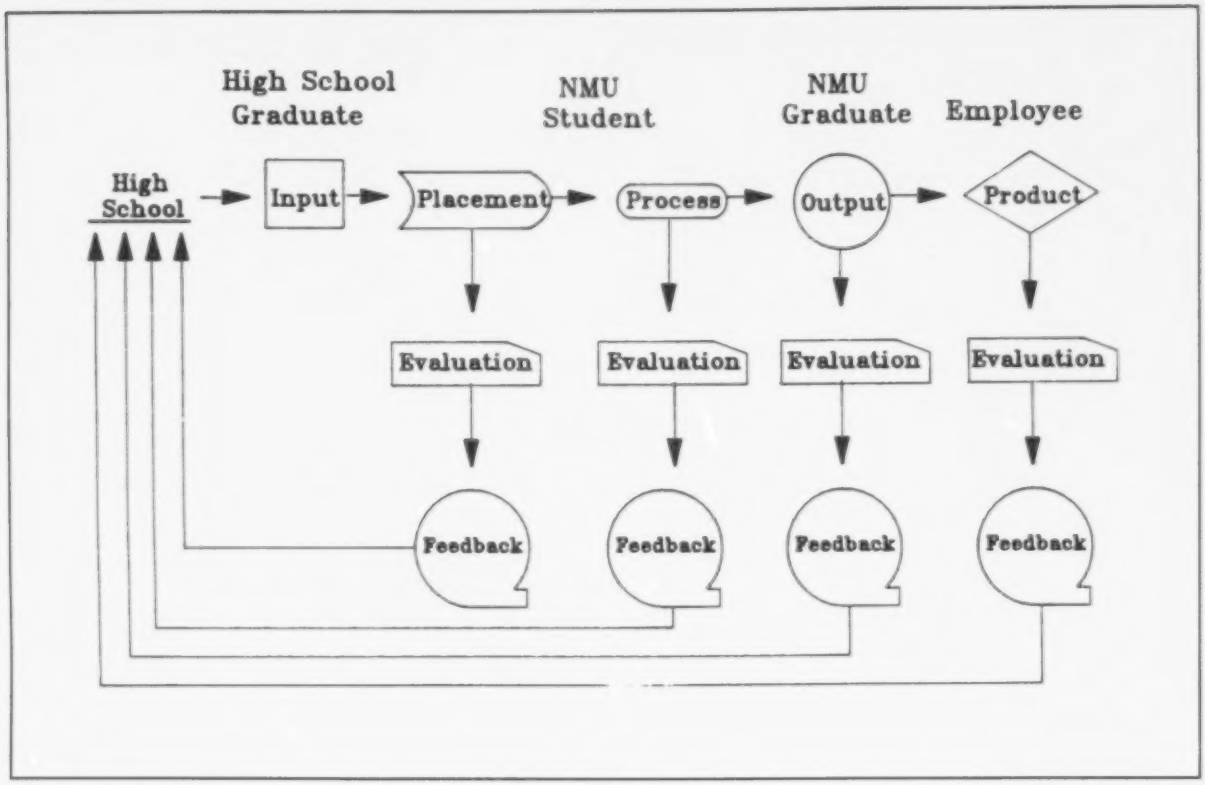

Figure 1. Northern Michigan University high school feedback model.

students will likely be more successful when they become our students.

Methodology

The NMU Feedback System provides a comprehensive portfolio of information to the high schools by producing four detailed data-driven letters. Despite its apparent complexity, from a methodological point of view the system is little more than a sophisticated example of mail-merge techniques. Rather than being limited to text fields such as name and address, however, the system employs a wide variety of data fields to produce quantitative analyses and graphic images personalized to the high school. In essence, the feedback system employs a relational technology in which data fields are related to each other using certain common elements. The most important common data element in the present system is the high school code. Placement test results, retention information, grade point averages, and even job-related data are all linked by the presence of the high school code. The present feedback system was developed using DataEase, but many other similar tools such as PARADOX, D-BASE IV, FOXBASE +, and FELIX are also available.

Given the power of the personal computer and the sophistication and flexibility of relational software, offices are now able to take direct control over application development projects. The mainframe computer has not been completely eliminated from this process, but its role has been drastically altered to "downloading" records for use by campus offices on personal computers. The feedback system merges admissions, performance, and graduation databases downloaded from the mainframe with other database files. The NMU approach prepares information in DataEase (a relational database) and sends it to LOTUS 1-2-3 (a spreadsheet) where the data are graphed. Finally, the graphs are incorporated into WORD (a word processor) which produces professional-quality letters on a laser printer.

Timing

NMU provides feedback to its major feeder high schools in a series of five letters. Each of the letters is presented with a specific topic in mind. The letters are spaced across the academic year so that NMU will have a chance to produce these documents efficiently, and the high schools will have an adequate amount of time to assimilate and make use of the information. The time schedule, which was implemented during 1990-91, is presented in the table that follows.

A single letter which contains elements of the comprehensive feedback model is sent to those institutions who provide NMU with only a small number of students. This letter contains a variety of placement, enrollment, performance, and graduation data. This single letter is mailed to institutions in January.

Discussion and Conclusions

While American education is loosely termed a "system," in actual practice it functions in a very different fashion.

Letter No.	Purpose	Date	Attach.	Sample Shown in
1.	System Introduction		Sept.	Sec. 1
2.	Placement Test Results		Nov.	Sec. 2
3.	Enrollment and Grade Point Averages by Class, School, and Department		Jan.	Sec. 3
4.	Retention Rates		Mar.	Sec. 4
5.	Degrees and Employment Information		May	Sec. 5

Harold Hodgkinson (1985) observed:

> Almost everyone who works in education perceives it as a set of discreet institutions working in isolation from each other . . . (these people) have virtually no connection with all the others and little awareness of educational activity provided by the total. Because of this, the school is defined as the unit, not the people who move through it. (p. 1)

However, there have been calls for greater interaction between the many levels of the educational spectrum. Boyer (1987, p. 3) argues that the nation's education structure should be "a seamless web," and he calls for educators to work mutually to build a stronger system.

Hodgkinson (1985) suggests the interdependence of educational levels by drawing an analogy to a food chain where any alteration in the ecology of the food chain affects all of the organisms at all points in that chain:

> It is assumed that if people can begin to SEE the educational system as a single entity through which people move, they may begin to behave as if all of education were related. It seems self-evident that such a perception is good. (p. 1)

If we, as educators, begin to perceive that successes at previous points on the educational continuum will have a positive impact on our efforts, then it becomes clear that it is in our best interest to help our "partners" in their efforts. The systematic incorporation of an evaluation and feedback loop can provide educators with a time-tested mechanism for determining the extent to which learning experiences are actually producing intended learning outcomes and desired behavioral changes in our students (Tyler, 1949).

The evaluation-feedback loop can be effectively employed in all phases of the system, and its widespread use will have an increasingly positive impact on the development of students as they pass through the various phases of the system. The Northern Michigan University High School Feedback System represents a formal commitment on the part of one college administration to share systematically a wide array of existing information with the high schools on which it depends so heavily. This project represents a philosophical recognition that our ability to accomplish our educational objectives depends heavily on the skills, knowledge, and attitudes which our students bring with them from their high school experience. This feedback system is designed to provide the schools with information for curricular evaluation and more effective academic advising. It can aid them with their own internal evaluations and can also help prepare them for accreditation requirements. Thus, the primary purpose of this elaborate feedback system is to help the secondary institutions do their jobs more effectively.

By enhancing the quality and quantity of communication by faculty and administrations at different instructional levels, we can begin to weave an educational structure made of a "seamless web." As Boyer (1983, p. 263) points out:

> . . . There is a thirst among the nation's secondary teachers for all kinds of help that will improve and ease their work. If the quality of the teaching in America's public schools is going to rise, then the nation's institutions of higher education cannot afford to sit back as indifferent spectators while the schools struggle with problems that they cannot solve alone.

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Appendix

The following examples have been extracted from the data driven letters which are tailored to a given high school utilizing the information from the students from that high school. Each section of the attachment provides an illustration of a portion of each main component of the NMU High School Feedback System.

Section 1
Placement Information

Fall 1989 English Placement Test

Level	Course	High Class High School No. Placed	%	NMU Totals No. Placed	%
Pre-College	EN080 Reading & Writing	6	4%	59	5%
	EN090 Basic Composition	21	16%	196	15%
College Level	EN111 College Composition	103	77%	982	78%
Advanced Level (with CLEP)	EN211 Writing & Literature	4	3%	28	2%
	Total	134		1,285	

Section 2
Process Information (Performance)

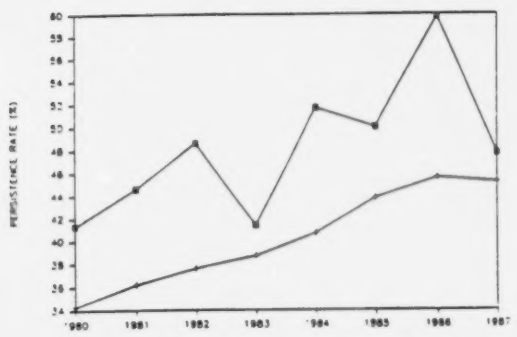
Fall 1989 Enrollment and GPA Data
School of Behavioral Sciences

Department	High Class High School Male Enrolled	GPA	Female Enrolled	GPA	Total Enrolled	GPA	Northern Michigan University Male Enrolled	GPA	Female Enrolled	GPA	Total Enrolled	GPA
Criminal Justice	37	2.81	16	2.94	53	2.87	418	2.68	125	2.88	543	2.80
Education	2	2.37	15	3.00	17	2.97	118	3.10	353	3.08	470	3.07
Physical Education	6	2.58	4	2.77	10	2.63	116	2.69	152	2.73	268	2.83
Psychology	5	3.07	15	2.86	20	2.78	64	2.79	122	2.77	186	2.77
Social Work	2	1.77	19	2.80	21	2.66	43	2.66	151	2.78	194	2.70
Sociology	2	2.22	5	2.58	7	2.51	22	2.68	41	2.76	63	2.70
Total	64	2.63	74	2.73	128	2.69	781	2.82	943	2.83	1,724	2.74

Section 3
Process Information (Retention)

Persistence on Clear Academic Status After Five Semesters 1980-87

Cohort Year	1980	1981	1982	1983	1984	1985	1986	1987
High Class High School								
Number Who Persist:	53	54	53	53	60	53	61	63
Percent:	41.3	44.6	48.6	41.4	51.7	50.0	50.8	47.7
Overall NMU Freshman Class Percent	34.3	36.2	37.6	38.7	40.7	43.8	46.6	46.3



% Persisting After Five Semesters With a "C" or Better Average

Section 4
Output Information

Profile Sheet for High Class High School
Roster of Graduates

From Summer 1989 through Winter 1990, 11 students who were graduates of your high school received degrees from NMU. The names, year of high school graduation, degrees, degree major, and honors (if applicable) are listed below.

NAME (Maiden Name)	H.S. YEAR	DEGREE	DEGREE MAJOR	HONORS
Alice Cramden	'91	BS	Mathematics	Magna Cum Laude
Michael Dukakis	'83	BS	Psychology/Grad Prep	
Julie Fortune (Small)	'78	BS	Elementary Education	Cum Laude
Albert Kaline	'80	BS	Management	
Robert G. Laser	'81	VOC	Machine Tool Tech	
Real L. McCoy	'72	BSN	Nursing	
Sue A. Mole	'76	BSN	Nursing	Magna Cum Laude
Mary Munchkin (Peterson)	'90	BS	Office Administration	
Peter A. Pan	'75	BS	Accounting	Cum Laude
Kelly O. Shea	'83	BSN	Nursing	
Tom C. Thumb	'86	VOC	Culinary Arts	

Section 5
Product Information

HIGH CLASS HIGH SCHOOL
JOB PLACEMENT INFORMATION

From Fall 1985 through Fall 1989, 9 students who were graduates of both your high school and our university responded to an alumni survey. The names, year of high school graduation, company, job title, location and the year in which the information was collected are presented below.

NAME (Maiden Name)	H.S. CLASS	COMPANY	JOB TITLE	COMPANY LOCATION	YEAR DATA COLLECTED
Connie M. Blond	'82	Armour Inc.	Butcher	Ames, Iowa	1987
Aldino C. Camp	'79	Hostess LTD	Baker	Alpena, MI	1986
Alex W. Cotter	'78	Santa's Village	Candlestick Maker	Dundee, IL	1987
Bret T. Danish	'81	Price Waterhouse	Accountant	Oakland, CA	1985
Evil Y. Kinevil	'82	Bronco Billy's	Daredevil	Yuma, AZ	1989
Sarah R. Meekly	'81	Fleece Mortgage	Loan Ofc.	Chicago, IL	1986
Sally L. Rope (Ship)	'80	1st National	Controller	Detroit, MI	1986
Tully P. Tope	'82	Ace Building	Hod Carrier	Alma, MI	1989
Therese R. Yates (Smith)	'83	Investment LTD	Geologist	Provo, UT	1985

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